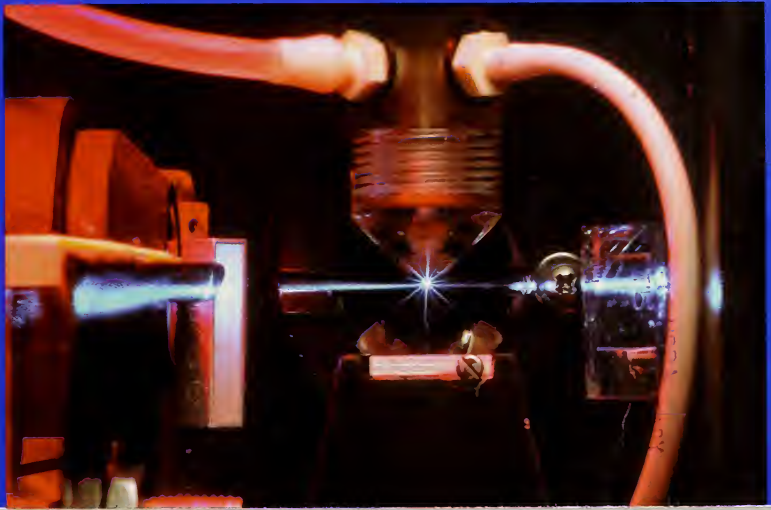
United States Department of Agriculture
Agricultural Research Service
Office of Technology Transfer
Program Aid 1706

Forming Partnerships With the Agricultural Research Service



The Agricultural Research Service (ARS)

has a successful history of partnering with commercial firms to transfer the fruits of agricultural research to American farmers and consumers. The Federal Technology Transfer Act of 1986 dramatically changed the way the federal government does business. This act allows federal laboratories and industry to form commercial partnerships that enhance the development of new technologies and move them into the marketplace. ARS is a leader in the federal government in transferring and marketing new technologies developed from its research and has formed thousands of partnerships using cooperative agreements. The Office of Technology Transfer (OTT) facilitates and coordinates these partnerships.

ARS-developed 100-percent soy ink

Cooperative Research and Development Agreements

A Cooperative Research and Development Agreement (CRADA) is appropriate for commercial firms seeking to further develop and commercialize an ARS invention, merge ARS technology with their own technology, or jointly discover and develop a new technology. CRADAs are unique in providing the cooperator the right to negotiate an exclusive license to inventions made under the agreement and providing extended confidentiality for information generated under the agreement. Under a CRADA, ARS scientists collaborate with private firms to help commercialize the technologies developed.

Adhesive from cornstarch

Other Types of Partnerships

ARS enters into other strategic partnerships with federal, state, and private organizations that help deliver new technologies to the public. These partnerships are Trust Fund Cooperative Agreements, Reimbursable Cooperative Agreements, Memorandums of Understanding, Material Transfer Agreements, and Confidentiality Agreements. ARS technology transfer coordinators can assist with these agreements.

Trust Fund Agreements and Reimbursable Agreements are similar to CRADAs but lack the provision for negotiating an exclusive license and complete assurances of confidentiality. In both agreements, the cooperator provides funds to ARS. With Trust Fund Agreements, ARS receives some or all of the funds when the agreement takes effect. Reimbursable Agreements allow the partner to reimburse ARS as required for the research. Confidentiality provisions apply to the cooperator's proprietary material, but information developed by ARS during either agreement can be withheld from public disclosure to protect intellectual property rights until a patent application is filed.

A Memorandum of Understanding is similar to a Trust Fund Agreement but no money changes hands. Other resources, such as personnel, supplies, or equipment, may be exchanged.

Scientists use Material Transfer Agreements (MTAs) when they want to provide material to someone outside of ARS, but want to maintain control over the material and avoid public disclosure. An MTA is also used to bring material into ARS from outside parties for research purposes. Generally, an MTA specifies what the material is and what it can be used for, restricts giving it to a third party without permission, prohibits commercial use, and specifies its disposition.

ARS scientists use a Confidentiality Agreement (CA) with someone outside the agency when they want to discuss confidential information or data that may have patent potential. CAs are also used when a company needs to discuss confidential information with an ARS scientist. A standard CA may be obtained from the technology transfer coordinator or the OTT web site.

Fantesk™ products from ARS-patented technology

The cooperating firm provides the resources needed for developing and commercializing a new product, process, or service. The firm may provide funds to cover additional costs to ARS for work done under the agreement, and it may contribute personnel, equipment, or materials. ARS provides research staff, laboratory facilities, materials, equipment, supplies, and other in-kind contributions. Both parties bring their expertise to the agreement, and both conduct some portion of the work. As with its other cooperative agreements, ARS enters into a CRADA only when the work objective relates to the research unit's mission.

Benefits of CRADAs to Commercial Firms

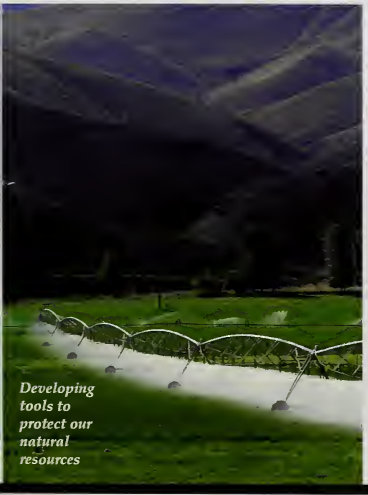
- Right to negotiate exclusive licenses on patented inventions made under an agreement
- Direct access to ARS scientific expertise
- Potential to commercialize new ARS technologies.

Benefits of CRADAs to ARS

- Wider opportunities for developing and transferring technologies
- Feedback from industry on its research needs
- Increased familiarity with problems related to commercializing a product or process.

How a Firm Can Initiate a CRADA

- Search ARS' on-line databases for information about its research programs (see Additional Information on reverse)
- Contact ARS scientists responsible for research projects that interest you
- Develop a brief proposal with the ARS scientist and Technology Transfer Coordinator (TTC)
- Ensure the proposal receives appropriate preliminary review and clearance in your firm
- Work with the ARS scientist and TTC to develop a statement of work for the agreement
- Internally approve the CRADA with its proposed research plan.



Developing tools to protect our natural resources

ARS research is evident in the development or improvement of many products

Patent License Program

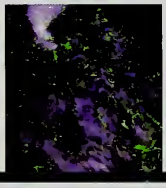
Many important ARS discoveries are transferred directly to the public, without intellectual property protection. Some ARS inventions require significant financial investments and resources from the private sector before the public can benefit from a new, improved product or service. To provide an incentive for such investments, ARS may patent new inventions and transfer technologies to the public through patent licenses.

The ARS technology licensing program grants licenses to qualified businesses and individuals who wish to commercialize ARS technologies. Licenses may be exclusive, nonexclusive, or partially exclusive, and foreign patent rights are available for licensing in some cases. The ARS Office of Technology Transfer administers the entire U.S. Department of Agriculture's technology licensing program.

Above: Lactose-reduced products from ARS technology

Near right: Biodegradable, starch-based plastics

Middle right: Improving peanuts



Left: Technologies for improving food safety like those identifing the microbe Campylobacter, shown here in green on chicken skin

How to Apply for a Patent License

Licensing federally owned inventions is done in accordance with federal regulations (37 CFR 404). A copy of these regulations can be obtained from the technology licensing program coordinator or the OTT web site.

Businesses or individuals who want to commercialize an ARS invention must submit a patent license application. Information provided with the application is used to determine whether the applicant has a sufficient plan for developing and marketing the invention, as well as the financial and technical resources needed to carry out the plan. Business plans from a license applicant are confidential.

Patent license applications are available by mail or may be downloaded electronically from the OTT home page. All patent license applications should be forwarded to the technology licensing program coordinator.

License Provisions

Patent licenses granted by USDA are royalty bearing and include provisions for license execution fees, annual license maintenance fees, and patent cost reimbursements. License fees and royalty rates are negotiable. Information submitted by the applicant—including estimates of potential market size, market share, and profitability—is used to help determine fair and reasonable terms. Other factors are also considered, such as scope of the licensed patent, scope of rights granted, and financial and resource investments required for commercialization.

Licensees are required to submit periodic progress reports detailing the progress made to commercialize licensed patents. After the first sale of royalty-bearing products, licensees are required to submit royalty reports, including information on quantity of products made, used, and sold and the amount of royalties due USDA. This information is confidential and not publicly disclosed.

Special Consideration for Exclusive Licenses

Exclusive or partially exclusive patent licenses—including licenses that are co-exclusive (limited number of licensees), exclusive territory (limited to a specific country), and exclusive field (limited to a

Successful Commercial Partnerships

ARS continues to foster relationships with many businesses throughout the United States and, in so doing, creates new job and economic opportunities. Several ARS technologies have resulted from fruitful partnerships or have paved the way for new partnerships. Many small businesses have built new industries based on ARS research and products. These companies have helped bolster local, state, and national economies.

One of the most commercially successful inventions that led to a new business endeavor is SuperSlurper, an ARS-patented cornstarch absorbent that can hold 2,000 times its weight in water. SuperSlurper is in disposable diapers, body powders, batteries, filters, and wound dressings.

A start-up company made its mark on the egg industry thanks to an ARS-patented method to immunize poultry by injecting safe vaccines directly into eggs. ARS research on meadowfoam, an unusual plant oil, led to a new market in personal care products. These are just a few examples of many successful partnerships. Through such partnerships, the ARS Office of Technology Transfer helps deliver innovative technologies to a growing world.

Right: Products made from cornstarch

Additional Information

You can learn more about ARS research from individual scientists, professional society meetings and journals, or the resources listed below:

Office of Technology Transfer Home Page contains information on cooperative partnerships, patent licensing program, recently issued patents, and newly filed patent applications.
http://ott.ars.usda.gov

Agricultural Research Service Home Page is the electronic gateway to the principal research agency of the U.S. Department of Agriculture. ARS conducts research of national scope that affects the daily lives of consumers.
http://www.ars.usda.gov

ARS National Programs Home Page describes ARS' national programs and peer review process. The agency's work falls into three major categories: Animal Production, Product Value, and Safety; Natural Resources and Sustainable Agricultural Systems; and Crop Production, Product Value, and Safety.
http://www.nps.ars.usda.gov

Agricultural Research is USDA's science magazine, published monthly by the ARS Information Staff. Articles and photographs are posted monthly on the World Wide Web.
http://www.ars.usda.gov/is/AR

Technology Transfer Information Center helps convert research inventions into commercial products by getting them into the hands of people and organizations who can put them into practical use. For more information, contact:

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Beltsville, MD 20705–2351
Phone: (301) 504–6875
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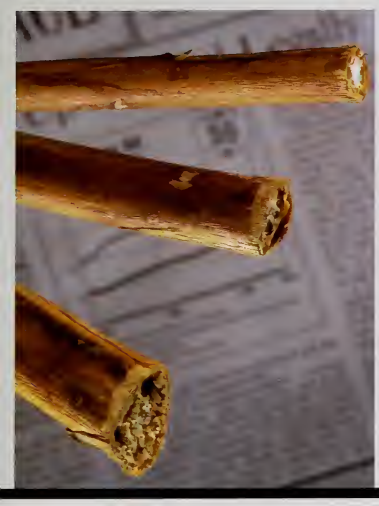
Near right: Improving cheese and other dairy products

Middle right: Adding quality through biotechnology research

Far right: Solving problems with biocontrol strategies



Left: ARS is developing new uses for kenaf plants

Above: Protecting animal production and health through technology

Right: Adding quality through biotechnology research

specific use)—may be granted for non-CRADA inventions, but only after public notice has been made.

Technology Transfer Coordinators

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ARS Mission

As the principal in-house research arm of the U.S. Department of Agriculture, ARS conducts research to develop and transfer solutions to agricultural problems of high national priority and provides information access and dissemination to—ensure high-quality, safe food and other agricultural products, assess the nutritional needs of Americans, sustain a competitive agricultural economy, enhance the natural resource base and the environment, and provide economic opportunities for rural citizens, communities, and society as a whole.

Laboratory Visits

To acquaint commercial firms with its latest research discoveries, ARS periodically holds technology transfer meetings at its laboratories. Here, industry representatives can meet and confer with individual scientists about ongoing research projects.

Cover Photo:
Patented livestock sperm-sorting system

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